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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,002	07/12/2005	Takeshi Togano	03500.018078	6162

5514 7590 08/08/2007
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EXAMINER

HAILEMARIAM, EMMANUEL

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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08/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,002

Applicant(s)

TOGANO ET AL.

Examiner

Emmanuel Hailemariam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/28/2006, 7/12/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 4/21/2003. It is noted, however, that applicant has not filed a certified copy of the 2003-115959 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112: The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "the pixel " on claim 4 lines 3 does not clearly indicate it is confusing whether the reflecting layer is a charge particle (as recited in claim 4) or alight reflecting layer.

Claim Objections

3. Claim 1 is objected to because of the following informalities:

Claim 1, line 16 recites the "color zone" is better to say "color area".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-14** are rejected under 35 U.S.C. 102(b) as being anticipated by Uno et al. (US Patent No. 20020067333 A1).

AS to claim 1, Uno discloses a reflective display apparatus (fig.11 [0080] that creates a display by moving particles, comprising: a front substrate (fig.11 (1b)) and a back substrate (fig.11 (1a)); a plurality of charged particles sandwiched between said front substrate and back substrate (fig.11 (1a)); a first electrode (fig.11 (56)), [0129] and a second electrode placed on said back substrate (fig.11 (57)), [0129]; a support member (fig.11 (3)) provided to keep a distance between said front substrate and back substrate; and a colored area (fig.11(8a,8b),[0080] provided on said back substrate (fig.11(57)); wherein reflecting means is provided in a space partitioned by said support member (fig.11(3),[0080]) and said colored area is placed in such a way that the surface of projection on the back substrate of said second electrode and the surface of projection on the back substrate of said colored zone at least contact with each other ((fig.11), [0080]).

AS to claim 2, Uno discloses the reflective display apparatus according to claim

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1, wherein said colored area is colored in substantially the same color as that of said charged particles and the area other than said colored area is colored in a second color which is different from the color of the charged particles [0019].

AS to claim 3, Uno discloses the reflective display apparatus according to claim 1, wherein said colored area is a light-absorbing layer [0013], a gap is provided between said first electrode and second electrode within the back substrate and the colored area is placed on the back substrate so as to overlap at least with the gap, [0113], [0019]).

AS to claim 4, Uno discloses the reflective display apparatus according to claim 1, wherein said support member is placed so as to partition the pixel (fig.11 (3), [0056], [0074]).

AS to claim 5, Uno discloses the reflective display apparatus according to claim 1, wherein said second electrode (56, 57) is provided on said support member (fig.11 (3), [0080]).

AS to claim 6, Uno the reflective display apparatus according to claim 1, wherein said second electrode ((fig.11 (57)) is placed between said support member (fig.11 (3)) and said back substrate (fig.11(1a)), [0056], [0130].

AS to claim 7, Uno discloses the reflective display apparatus according to claim 1, wherein an insulating liquid is further provided in the gap between said front substrate and back substrate. (fig.11(1a), [0056], [0130], [0130]).

AS to claim 8, Uno discloses the reflective display apparatus according to claim 1,

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wherein said colored area is a light absorbing layer [0013] and includes a plane overlapping with said support member (fig.11 (3)) within a plane horizontal to said back substrate. (fig.11 (1a)), [0056], [0130],).

AS to claim 9, Uno discloses the reflective display apparatus according to claim 1, wherein said colored area is a light absorbing layer [0013] and provided on one side of the display area of said display apparatus ((fig.11), [0056], [0130],).

AS to claim 10, Uno discloses the reflective display apparatus according to claim 1, wherein said colored area is a light absorbing layer and placed between said first electrode and second electrode, and said back substrate (fig.11(1a), ([0077], [0080])).

AS to claim11, Uno discloses the reflective display apparatus according to claim 1, wherein said reflecting means is said plurality of types of charged particles ([0077], [0080])).

AS to claim 12, Uno discloses the reflective display apparatus according to claim 1, wherein said reflecting means is a light reflecting layer provided on said back substrate [0080].

AS to claim 13, Uno discloses the reflective display apparatus according to claim 12, wherein said light reflecting layer includes at least one of said first electrode or second electrode ([0077], [0080])).

AS to claim 14, Uno discloses the reflective display apparatus according to claim 12, wherein the surface of said light reflecting layer is provided with a concavo-convexo structure ([0008])).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 15, is rejected under 35 U.S.C. 103(a) as being unpatentable over Uno et al ((US Patent No. 20020067333 A1).) in view of (AAPA).

AS to claim 15, Uno discloses an electrophoresis display apparatus comprising: a first substrate (fig.11 (b)) and second substrate (fig.11 (a)) arranged with a predetermined gap in between; an insulating liquid (fig.11 (4), [0056]) and a plurality of charged particles (fig.11 (15)) enclosed in the gap between these substrates; a first electrode (fig.11 (56)) placed along said first substrate over a relatively wide area of a pixel.

Uno doesn't explicitly teach a second electrode between which and said first electrode a voltage is applied, voltage to these electrodes and moving said charged particles wherein said charged particles are colored, the density of said charged particles cannot be kept high is colored in substantially the same color as said first color, the density of said charged particles can be kept high is colored in a second color, and cover said first electrode, said first color is visually recognized.

However, AAPA discloses a second electrode between which and said first electrode a voltage is applied, applying a voltage to these electrodes and moving said charged particles [0002] wherein said charged particles are colored in a first color ([0003], [0008]), the density of said charged particles cannot be kept high is colored in substantially the same color as said first color ([0003], [0008]), said first electrode is placed in which the density of said charged particles can be kept high is colored in a second color [0005], and cover said first electrode, said first color is visually recognized and when said charged particles are attracted to said second electrode and accumulated, said second color is visually recognized [0004].

Therefore, taking the combined teaching of Uno and AAPA as a whole would have been rendered obvious to one skilled in the art to modify Uno to utilize a second electrode between which said first electrode a voltage is applied so that the charged particles is visible to an observer, and electrophoresis display apparatus carrying out a display by applying a voltage to these electrodes and moving said charged particles for the benefit of preventing deterioration of the display's quality [0008].

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Hailemariam whose telephone number is 571-270-1545. The examiner can normally be reached on M-F 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


AMARE MENGISTU
SUPERVISORY PATENT EXAMINER